

SP160 /SP161 Series Shut-off and Divert Ordering Information

- Features and Options
- All stainless steel constructions (T316L wetted parts)
- Precision molded seat assures positive shut-off and long life
- Seat material include:
 - EPDM (275 F Max)
 - Viton® (450 F Max)
 - P.T.F.E (replaceable seat) (140 F Max)
- Dual micro-switch or dual proximity switch option-
- Viton® stem o-ring
- Open yoke provides leak detection and visual stem position
- No special tools needed for valve maintenance



SP160__ - MS - 7 - 2" - 20 - EPDM

SP160= Short Stroke
SP161 = Long Stroke

"RS" If P.T.F.E seat
* If bonded plug leave blank

Indication Options
MS = Micro-switch
PRX = Prox-switch

Note: Micro-Switch and Prox-Switches are not available on 4"

Body Styles:
Shut-Off:
7 = Tee Body
9 = Cross Body

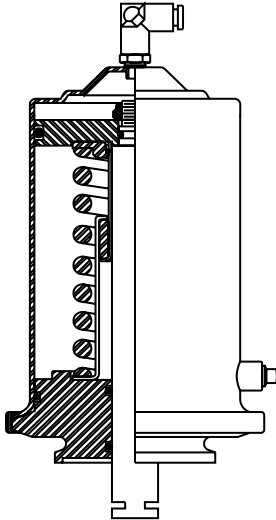
Divert:
77= Upper Tee
Lower Tee
79 = Upper Tee
Lower Cross
97 = Upper Cross
Lower Tee
99 = Upper Cross
Lower Cross

Bonded Plug Material
EPDM
Viton®

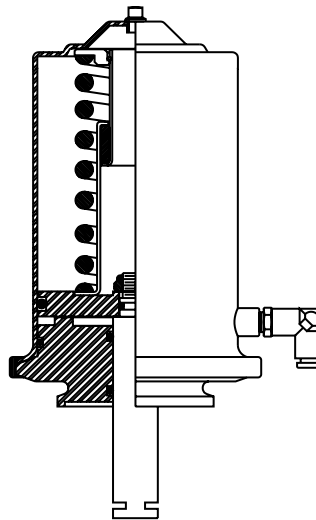
Actuator Style
H = Manual Handle
10 = Normally Open
20 = Normally Closed
30 = Air-to-Air

Valve Size
1/2"
3/4"
1"
1.5"
2"
2.5"
3"

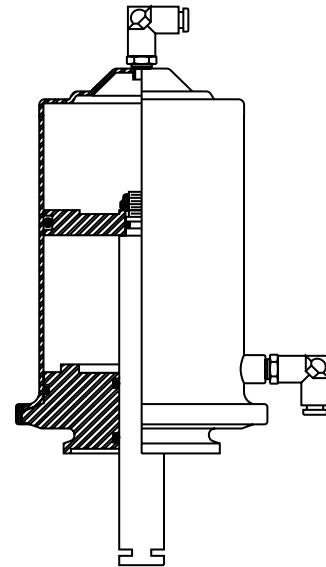
Short Stroke Actuators



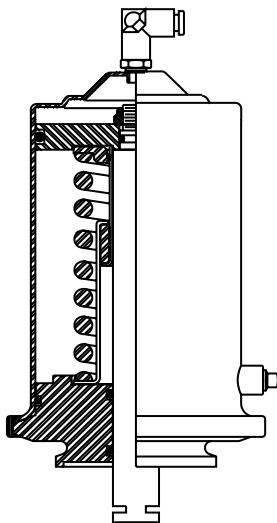
SP10
"Normally Open"
Air to Close-Spring to Open



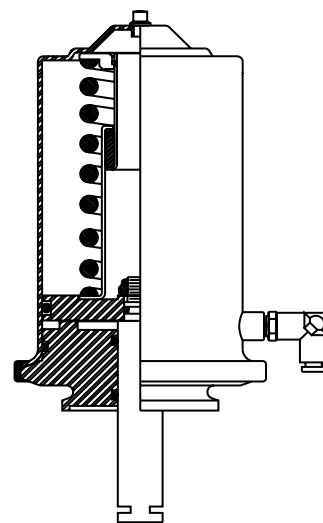
SP20
"Normally Closed"
Air to Open-Spring to Close



SP30
"Air-to-Air"
Air to Open-Air to Close



SP10/70
Light Duty Spring
"Normally Open"
Air to Close-Spring to Open
3-15 PSI Air Pressure



SP20/70
Light Duty Spring
"Normally Closed"
Air to Open-Spring to Close
3-15 PSI Air Pressure

Short Stroke Actuators

SP20 Shut-Off Capabilities

The following table gives the approximate maximum line pressure against which the spring in a normally-closed ; air-to-open valve will hold.

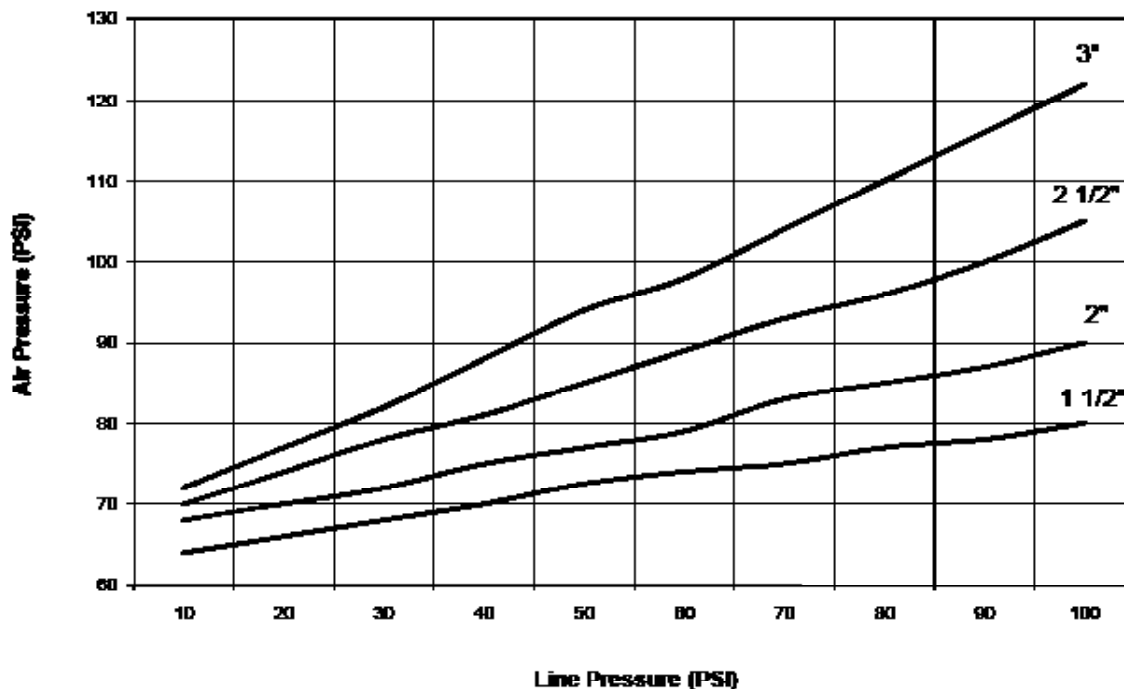
Valve Size	SP20 Actuator
1" & 1.5"	190 PSI
2"	100 PSI
2.5"	60 PSI
3"	45 PSI

SP10/70 and SP20/70 standard actuator with spring that has full movement with 15 PSI air pressure. No line pressure is considered.

Act. Size & Air Pres.	Product Pressure	
	1/2"	3/4"
50 PSI	195	195
60 PSI	230	230

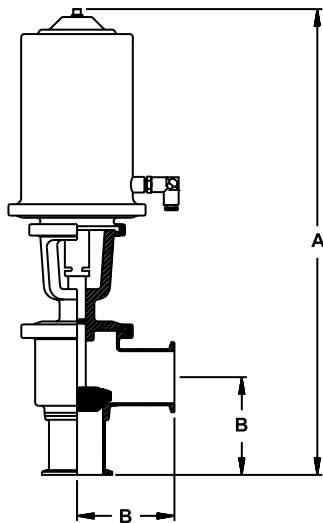
The chart below illustrates the air supply which must be available to a normally-open; air-to-close valve in order to fully shut off against the corresponding fluid pressure.

SP10 Actuator Line Pressure Curve

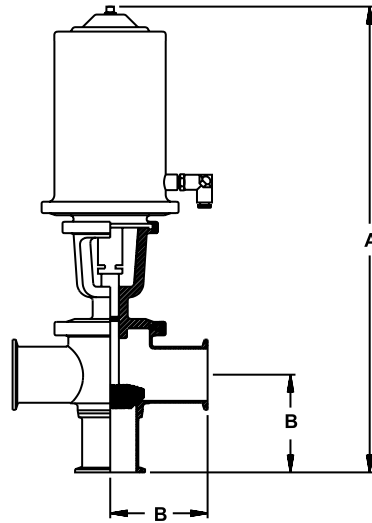


Short Stroke Valves

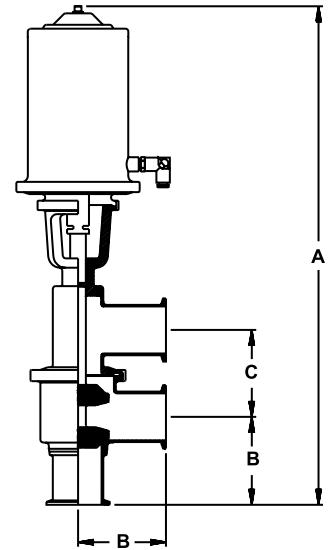
SP160 Series - Rubber Coated and PTFE Replaceable Seat



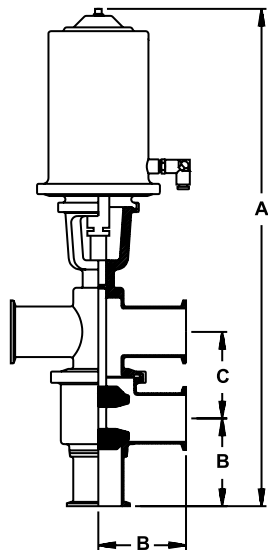
SP160-7-x-ACT



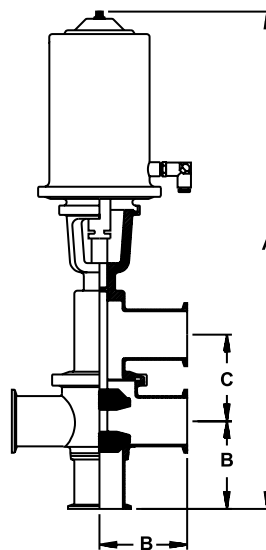
SP160-9-x-ACT



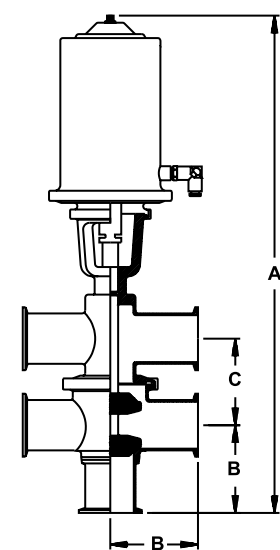
SP160-77-x-ACT



SP160-79-x-ACT



SP160-97-x-ACT



SP160-99-x-ACT

Valves are shown with #20

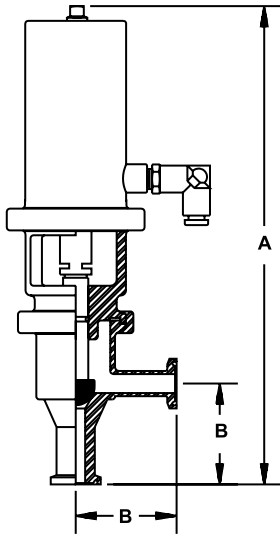
x=Valve size

All valves are standard with sanitary clamp end-connections, please contact factory for other options.

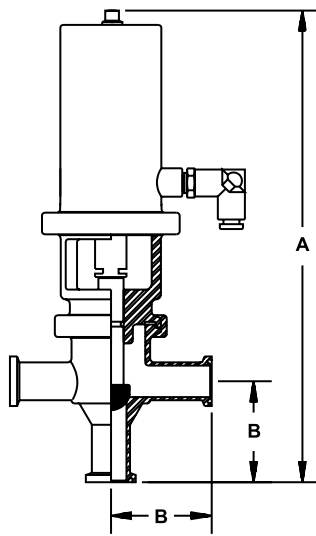
Size	Valve Dimensions				Shipping #'s	
	A.		B.		C.	
	Shut-Off Valve	Divert Valve	Shut-off Valve	Divert Valve	Shut-off Valve	Divert Valve
1"	14 7/8"	17 9/16"	2 1/2"	2 27/32"	16 1/2 #	18 #
1.5"	15 5/8"	18 5/16"	2 3/4"	2 15/16"	16 1/2 #	18 #
2"	15 5/8"	19 13/16"	3 1/2"	3 7/16"	16 1/2 #	19 1/2 #
2.5"	17"	20 11/16"	3 1/2"	3 15/16"	18 #	20 1/2 #
3"	17 11/16"	22 1/4"	3 3/4"	4 9/16"	20 #	22 1/2 #

Short Stroke Valves

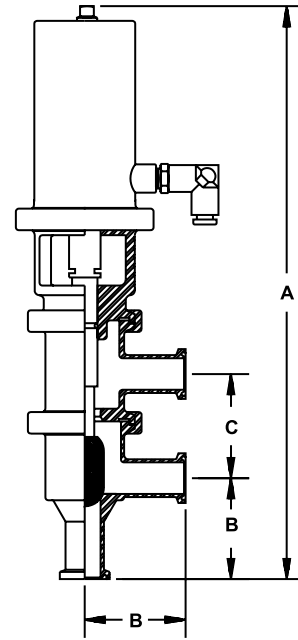
SP160 Series Fractional Valves - Rubber Coated and PTFE Replaceable Seat



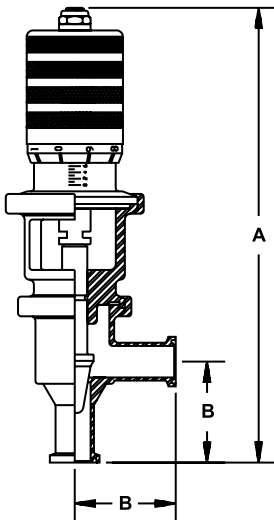
SP160-7-x-ACT



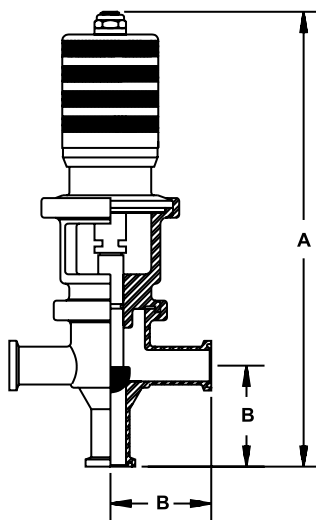
SP160-9-x-ACT



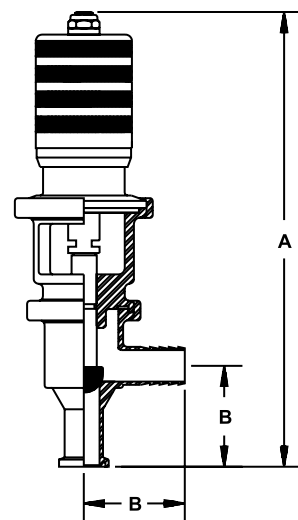
SP160-77-x-ACT



SP160-7MH-x



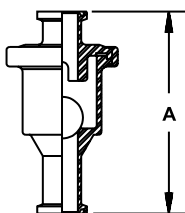
SP160-9-x-H



SP160-7S-x-H

x=Valve size

SP45V-x

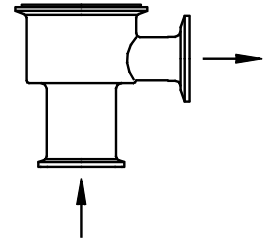
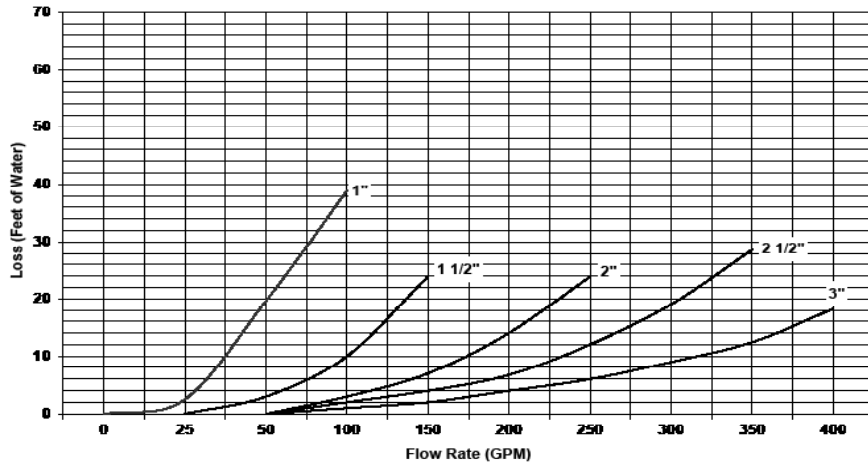


Valve Dimensions						
	A.				B.	C.
Size	Shut-Off Valve	Divert Valve	Hand Operated	Check Valve	Shut-off Valve	Divert Valve
1/2"	9 3/16"	11 1/4"	7 1/2"	4"	2"	2 3/16"

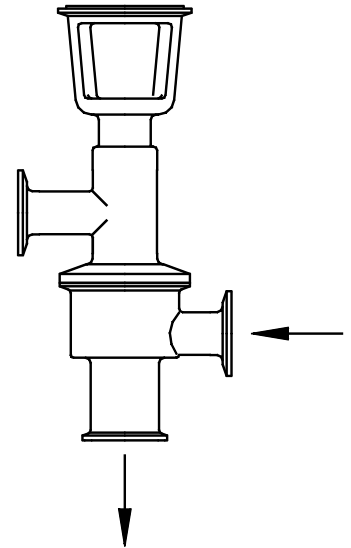
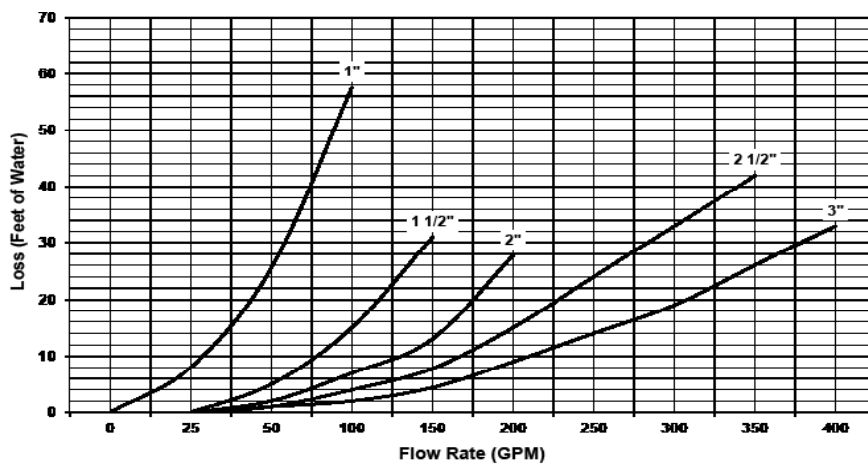
Short Stroke Valves

SP160 Series - Head Loss Curves

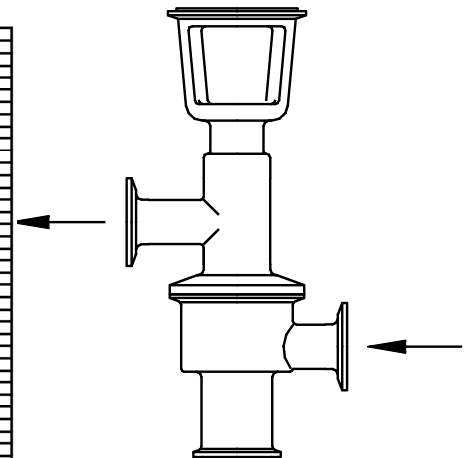
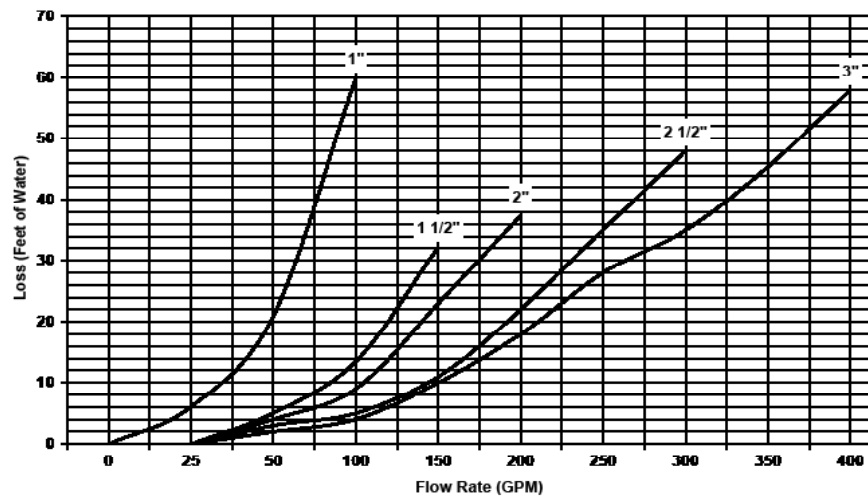
SP160-7 Tee Body Valve



SP160-77 Divert Valve



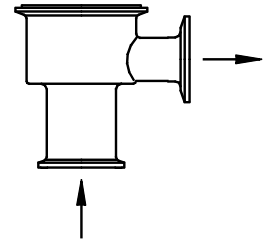
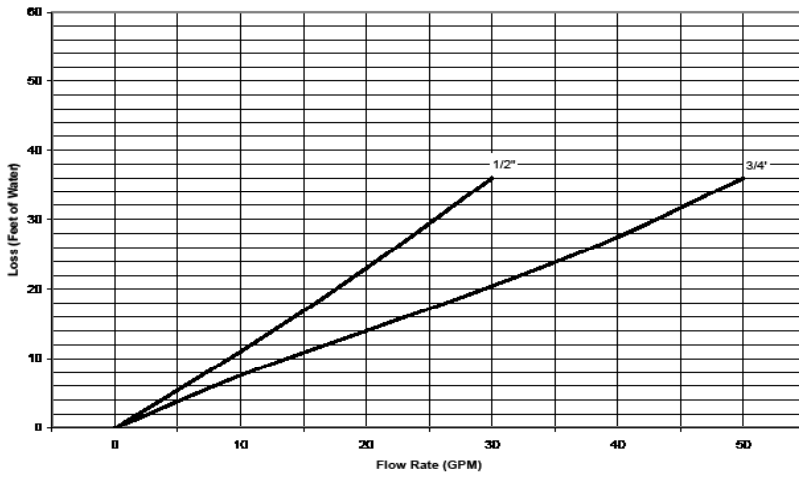
SP160-77 Divert Valve



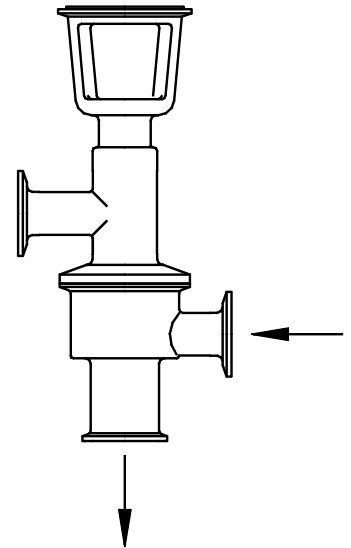
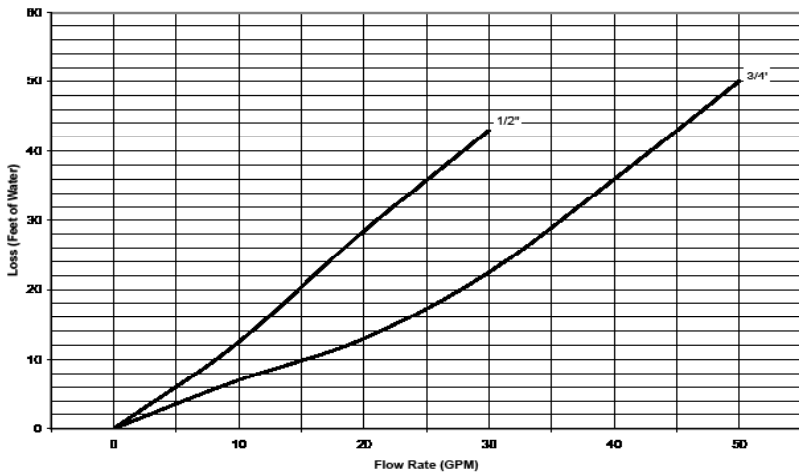
Short Stroke Valves

SP160 Series Fractional - Head Loss Curves

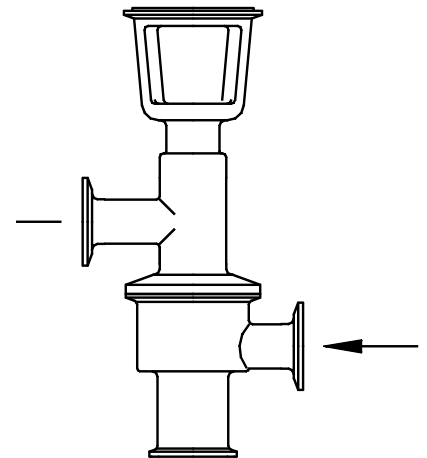
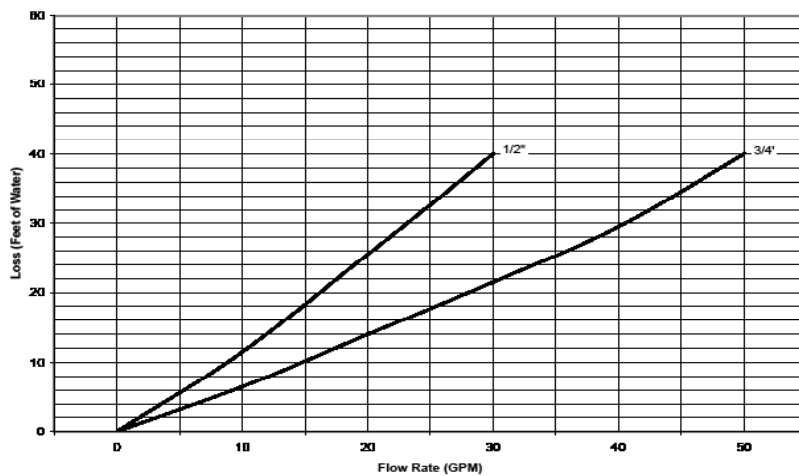
SP160-7 Tee Body Valve



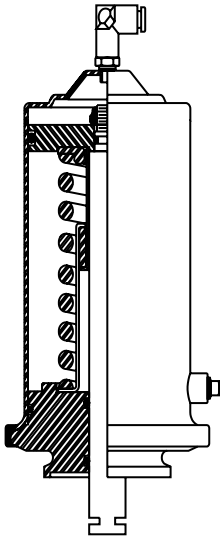
SP160-77 Divert Valve



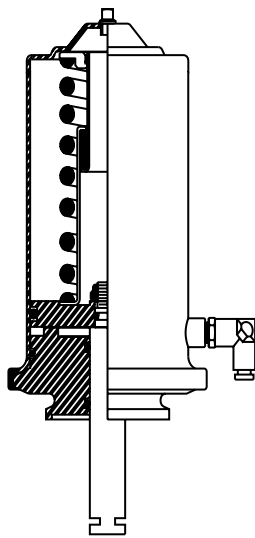
SP160-77 Divert Valve



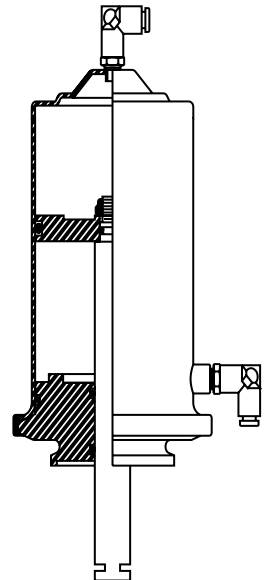
Long Stroke Actuators



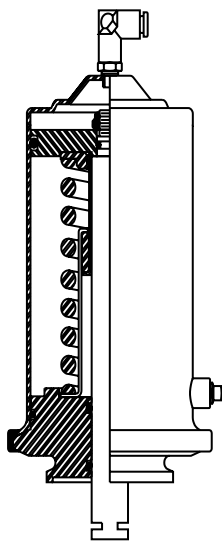
SP110
 "Normally Open"
 Air to Close-Spring to Open



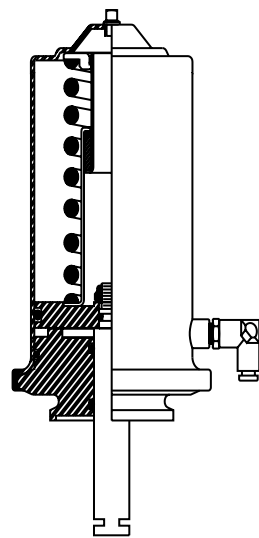
SP120
 "Normally Closed"
 Air to Open-Spring to Close



SP130
 "Air-to-Air"
 Air to Open-Air to Close



SP110/70
 Light Duty Spring
 "Normally Open"
 Air to Close-Spring to Open
 3-15 PSI Air Pressure



SP120/70
 Light Duty Spring
 "Normally Closed"
 Air to Open-Spring to Close
 3-15 PSI Air Pressure

Long Stroke Actuators

SP120 Shut-Off Capabilities

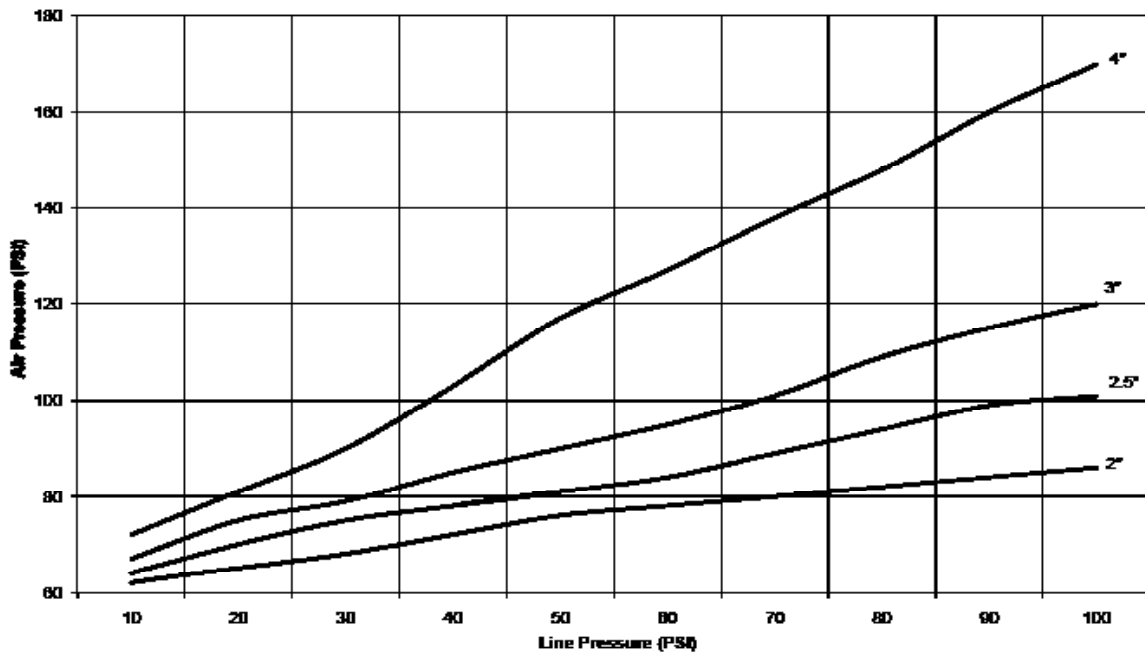
The following table gives the approximate maximum line pressure against which the spring in a normally-closed ; air-to-open valve will hold.

Valve Size	SP120 Actuator
2"	50 PSI
2.5"	30 PSI
3"	20 PSI
4"	Contact Factory

SP110/70 and SP120/70 standard actuator with spring that has full movement with 15 PSI air pressure. No line pressure is considered.

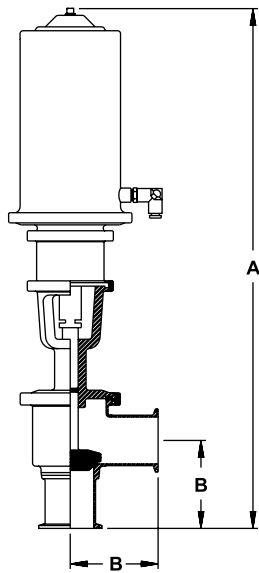
The chart below illustrates the air supply which must be available to a normally-open; air-to-close valve in order to fully shut off against the corresponding fluid pressure.

SP110 Actuator Line Pressure Curve

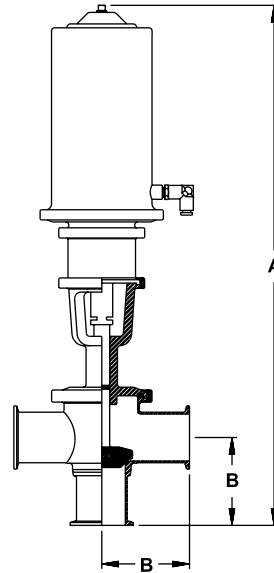


Long Stroke Valves

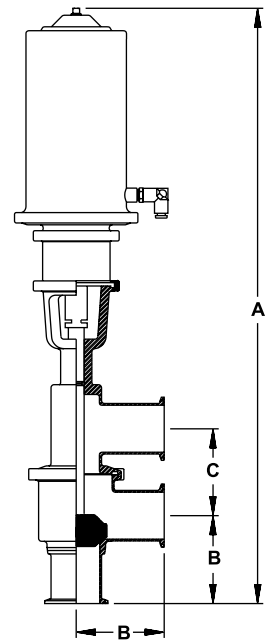
SP161 Series - Rubber Coated and PTFE Replaceable Seat



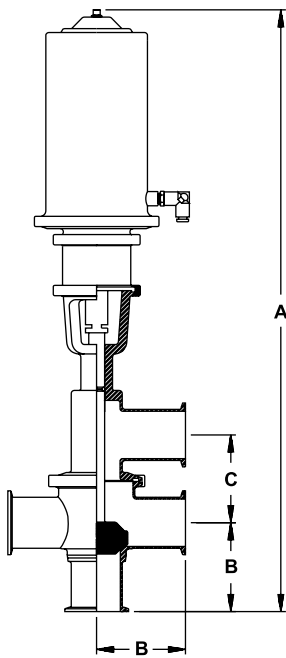
SP161-7-x-ACT



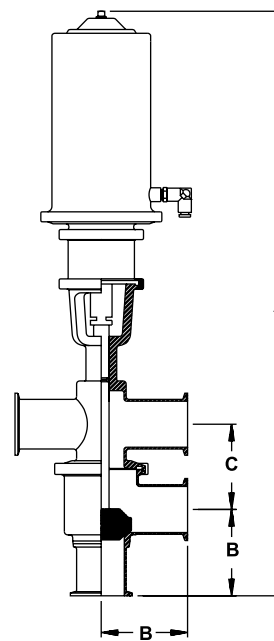
SP161-9-x-ACT



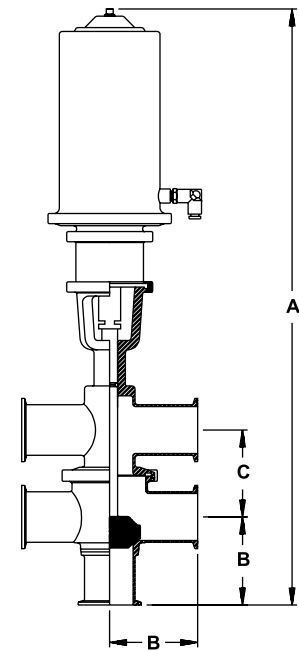
SP161-77-x-ACT



SP161-97-x-ACT



SP161-79-x-ACT



SP161-99-x-ACT

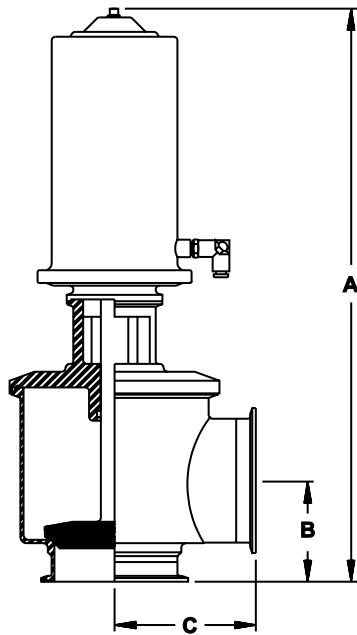
Valves are shown with #120 Act.
x=Valve size

All valves are standard with sanitary clamp end-connections, please contact factory for other options.

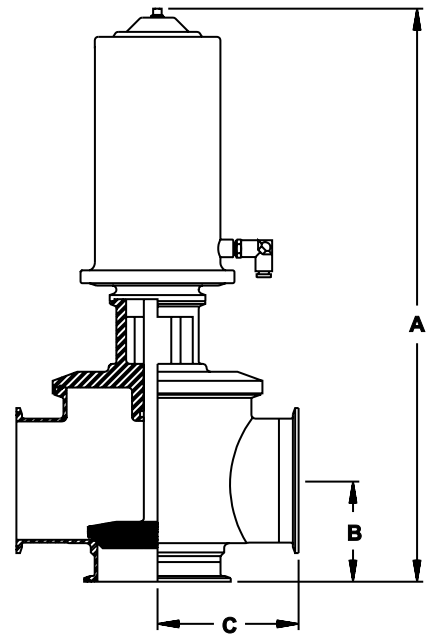
Size	Valve Dimensions				Shipping #'s	
	A.		B.		C.	
	Shut-Off Valve	Divert Valve	Shut-off Valve	Divert Valve	Shut-off Valve	Divert Valve
2"	21 3/4"	25 3/4"	3 1/2"	3 7/16"	16 1/2 #	19 1/2 #
2.5"	22 1/2"	27 1/4"	3 1/2"	3 15/16"	18 #	20 1/2 #
3"	23 7/8"	29"	3 3/4"	4 9/16"	20 #	22 1/2 #

4" Long Stroke Valves

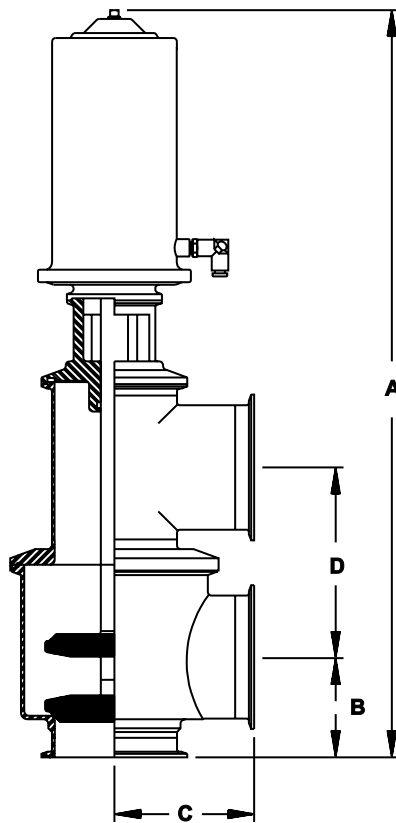
SP161 Series - 4" Rubber Coated and PTFE Replaceable Seat



SP161-7-4"-ACT



SP161-9-4"-ACT



SP161-77-4"-ACT

Valves are shown with #120 Act.

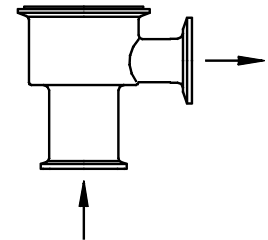
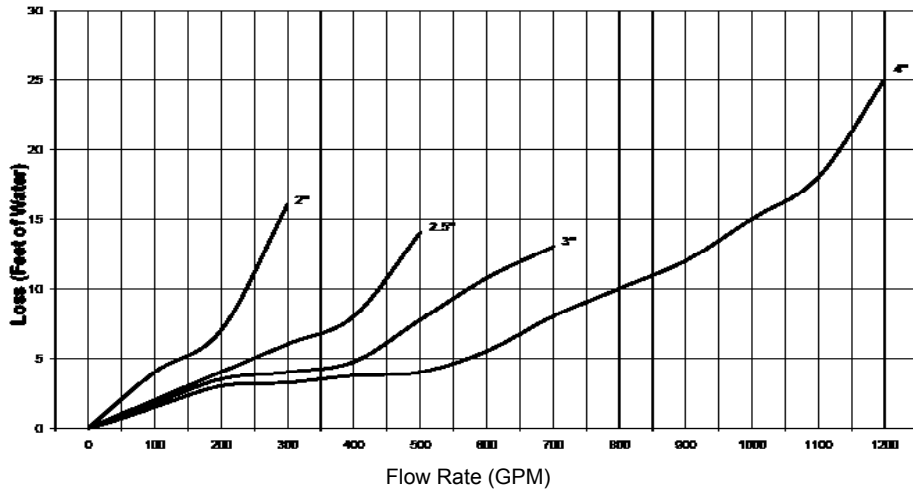
All valves are standard with sanitary clamp end-connections, please contact factory for other options.

Valve Dimensions						Shipping #'s	
Size	A.		B.	C.	D.	Shut-off Valve	Divert Valve
	Shut-Off Valve	Divert Valve	Shut-off Valve	Divert Valve	Divert Valve		
4"	19 1/8"	25 1/8"	3 3/8"	4 1/2"	6 1/8"	29 #	35 1/2 #

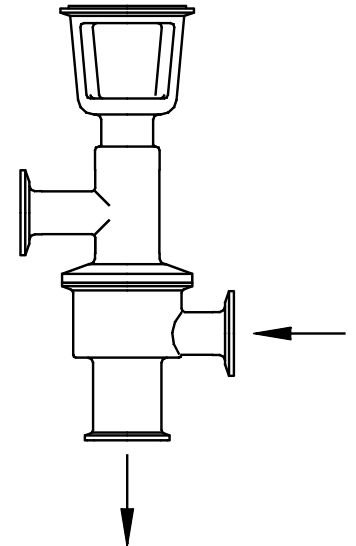
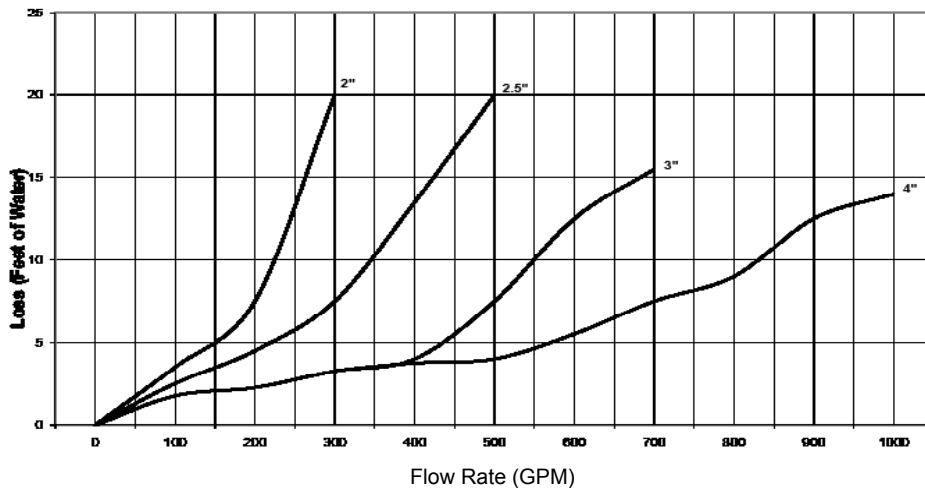
Long Stroke Valves

SP161 Series - Head Loss Curves

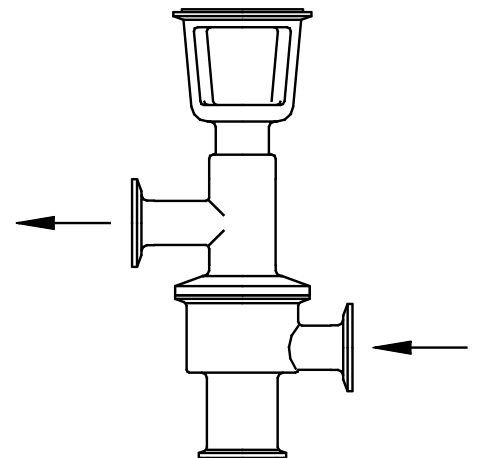
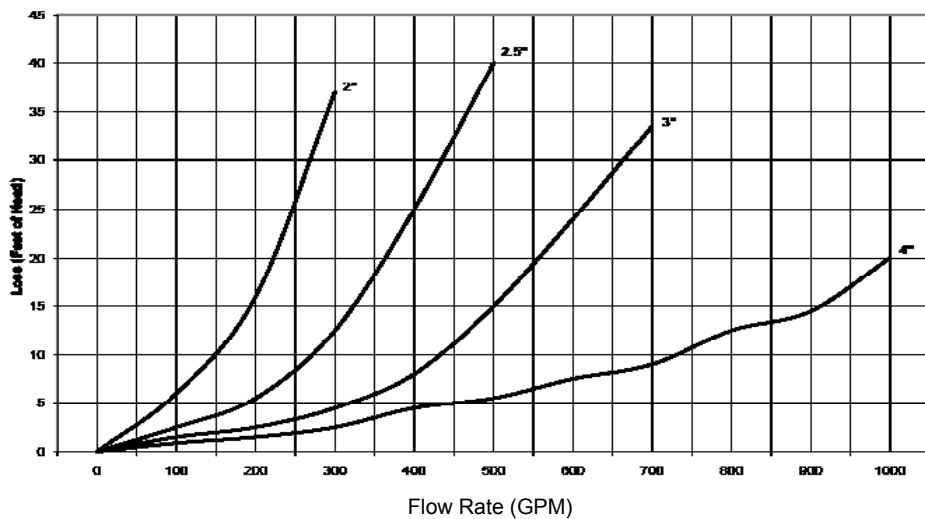
SP161-7 Tee Body Valve



SP161-77 Divert Valve

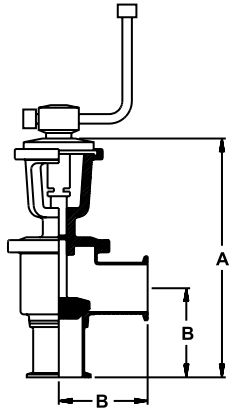


SP161-77 Divert Valve

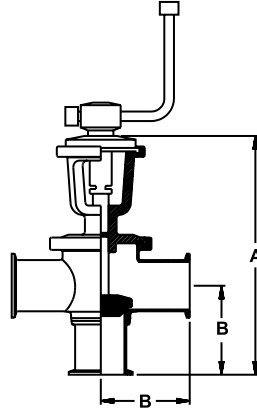


Manual Valves

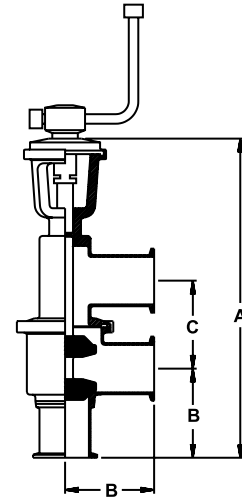
SP160 Series / SP161 Series- Rubber Coated and PTFE Replaceable Seat



SP160-7-x-H
OR
SP161-7-x-H



SP160-9-x-H
OR
SP161-9-x-H



SP160-77-x-H
OR
SP161-77-x-H

SP160 Series Short Stroke

SP160 Series Valve Dimensions					Shipping #'s	
Size	A.		B.		C.	
	Shut-Off Valve	Divert Valve	Shut-off Valve	Divert Valve	Shut-off Valve	Divert Valve
1"	7 1/8"	9 3/4"	2 1/2"	2 27/32"	2 1/2 #	3 1/2 #
1.5"	7 3/8"	10"	2 3/4"	2 27/32"	2 1/2 #	3 1/2 #
2"	8 3/8"	11"	3 1/2"	3 7/16"	3 1/2 #	4 1/2 #
2.5"	8 3/4"	12"	3 1/2"	3 15/16"	4 1/2 #	5 1/2 #

All valves are standard with sanitary clamp end-connections,

x=Valve size

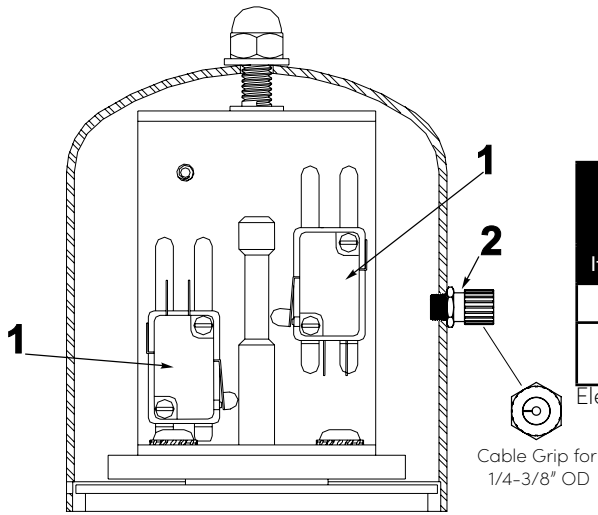
SP161 Series Long Stroke

SP161 Series Valve Dimensions					Shipping #'s	
Size	A.		B.		C.	
	Shut-Off Valve	Divert Valve	Shut-off Valve	Divert Valve	Shut-off Valve	Divert Valve
2"	9 7/8"	13 3/16"	3 1/2"	3 7/16"	8 #	10 #
2.5"	10 1/2"	14 1/4"	3 1/2"	3 15/16"	9 1/2 #	12 #

Micro / Proximity Actuators

SPI20MS

MICRO-SWITCH



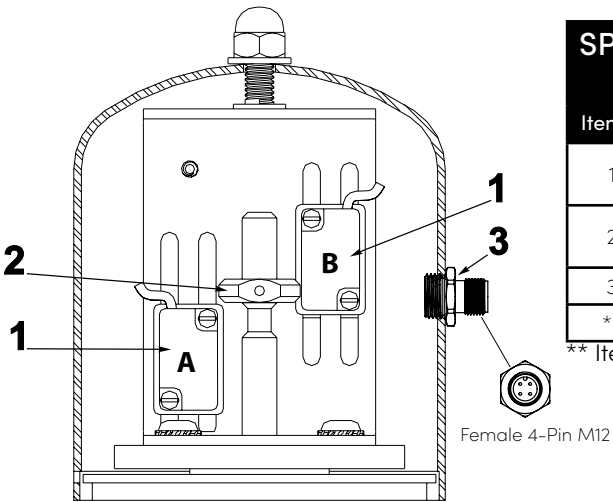
SP10MS/SP20MS/SP30MS/SP110MS/SP120MS/SP130MS Micro-Switch

Item #	Part Number	Description
1	SP10MS-3B	Micro Switches (x2)
2	SP10MS-CG	1/2" NPT Nylon Cable Grip for 1/4-3/8" OD range

Electrical connections made by user/customer

SP20PRX

PROXIMITY SWITCH



SP10PRX/SP20PRX/SP30PRX/SP110PRX/SP120PRX/SP 130PRX Proximity Switch

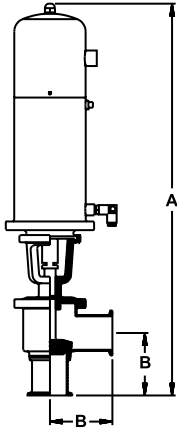
Item #	Part Number	Description
1	SP20-DPS	Proximity Switches (Dual Prewired) A = Bottom, B = Top
2	SP20PS-PD	Proximity Switch Indicator (Stainless Steel Prox Dog) with Set Screw
3	SP20-4P-NPT	1/2" NPT Adapter to Female 4-Pin M12
**	SP20-FWC-CONN	Male M12 to Cable Adapter (Included but Optional)

** Item not shown

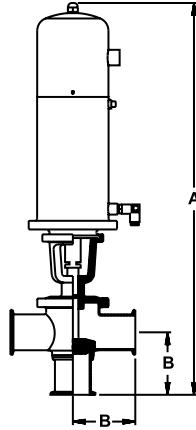
Stainless Products' micro/proximity switch offerings provide a solution for those needing open and closed feedback on the SP160 family of shutoff valves. A simple dual microswitch solution provides two roller-style microswitches, brackets, hardware, and a cable grip. A contactless dual proximity switch solution provides two proximity switches that are pre-wired. It also comes with accessories needed to use a four-pin M12 connector. An M12 patch cable or four-conductor cable can be used. Valve feedback provides true open and closed feedback from the valve itself via 24VDC signal to your control system.

Micro / Proximity Actuators

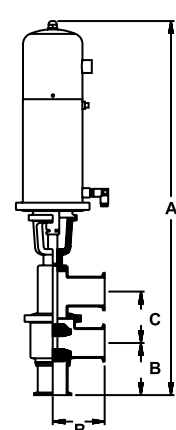
SP160MS / PRX - Short Stroke



SP160MS/PRX-7 Body



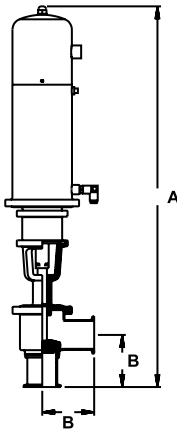
SP160MS/PRX-9 Body



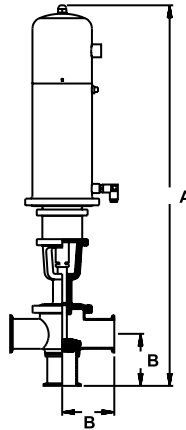
SP160MS/PRX-77 Body

Valve Dimensions					Shipping #'s	
	A.		B.	C.		
Size	Shut-Off Valve	Divert Valve	Shut-off Valve	Divert Valve	Shut-off Valve	Divert Valve
1"	21 1/8"	23 13/16"	2 1/2"	2 27/32"	22 1/2 #	24 #
1.5"	21 3/8"	24 1/16"	2 3/4"	2 27/32"	22 1/2 #	24 #
2"	27 1/2"	25 9/16"	3 1/2"	3 7/16"	22 1/2 #	25 1/2 #
2.5"	28 1/4"	26 7/16"	3 1/2"	3 15/16"	24 #	26 1/2 #
3"	29 5/8"	28"	3 3/4"	4 9/16"	26 #	28 1/2 #

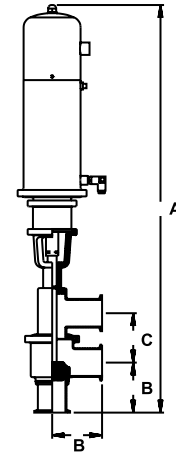
SP161MS / PRX - Long Stroke



SP161MS/PRX-7 Body



SP161MS/PRX-9 Body

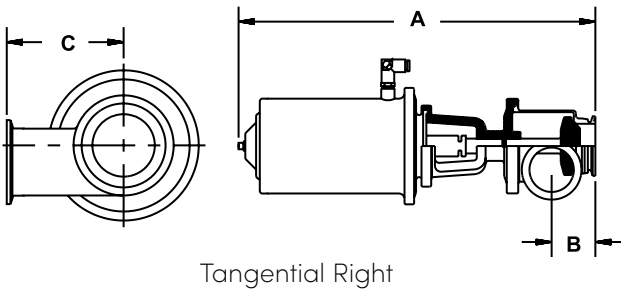


SP161MS/PRX-77 Body

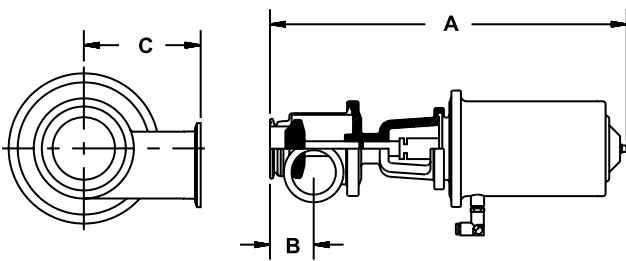
Valve Dimensions					Shipping #'s	
	A.		B.	C.		
Size	Shut-Off Valve	Divert Valve	Shut-off Valve	Divert Valve	Shut-off Valve	Divert Valve
2"	31 5/16"	33 5/8"	3 1/2"	3 7/16"	26 1/2 #	29 #
2.5"	32 7/16"	34 3/8"	3 1/2"	3 15/16"	26 1/2 #	29 #
3"	33 15/16"	35 3/4"	3 3/4"	4 9/16"	30 1/2 #	34 1/2 #

Tank Outlet Valves

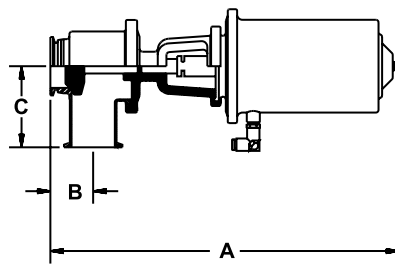
SP163 and SP1613 Tank Outlet Valves



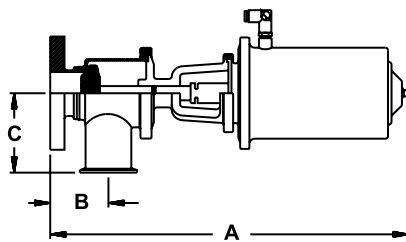
Tangential Right



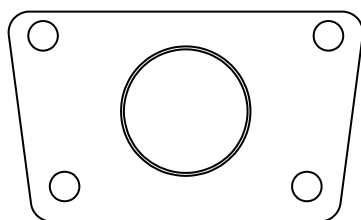
Tangential Left



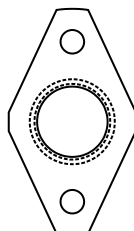
Straight



Flange



2 1/2" & 3" Valves



2" Valves

Size	Valve Dimensions				Shipping #'s	
	A.		B.	C.	Short Stroke Valve	Long Stroke Valve
	Short Stroke Valve	Long Stroke Valve				
2"	14 31/32"	21 1/8"	1 27/32"	4 1/8"	16.5 #	22 #
2.5"	15 13/16"	21 13/16"	2 5/16"	4 1/8"	18 #	22 #
3"	16 9/16"	22 11/16"	2 5/8"	4 1/2"	20 #	25 #
4"	N/A	19"	3 3/16"	4 3/4"	N/A	28 #

Size	Valve Dimensions				Shipping #'s	
	A.		B.	C.	Short Stroke Valve	Long Stroke Valve
	Short Stroke Valve	Long Stroke Valve				
2"	14 31/32"	21 1/8"	1 27/32"	4 1/8"	16.5 #	22 #
2.5"	15 13/16"	21 13/16"	2 5/16"	4 1/8"	18 #	22 #
3"	16 9/16"	22 11/16"	2 5/8"	4 1/2"	20 #	25 #
4"	N/A	19"	3 3/16"	4 3/4"	N/A	28 #

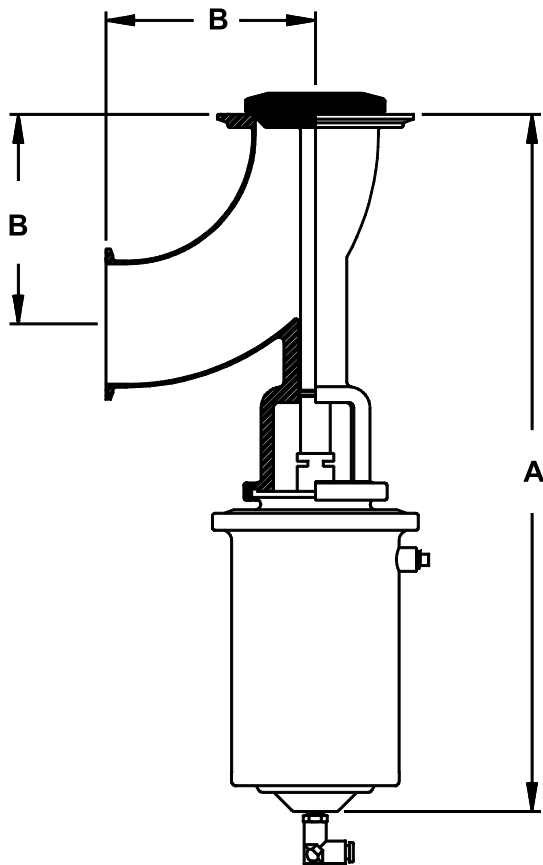
Size	Valve Dimensions				Shipping #'s	
	A.		B.	C.	Short Stroke Valve	Long Stroke Valve
	Short Stroke Valve	Long Stroke Valve				
2"	14 31/32"	21 1/8"	1 27/32"	4 1/8"	16.5 #	22 #
2.5"	15 13/16"	21 13/16"	2 5/16"	4 1/8"	18 #	22 #
3"	16 9/16"	22 11/16"	2 5/8"	4 1/2"	20 #	25 #
4"	N/A	19"	3 3/16"	4 3/4"	N/A	28 #

Size	Valve Dimensions				Shipping #'s	
	A.		B.	C.	Short Stroke Valve	Long Stroke Valve
	Short Stroke Valve	Long Stroke Valve				
2"	14 31/32"	21 1/8"	1 27/32"	4 1/8"	16.5 #	22 #
2.5"	15 13/16"	21 13/16"	2 5/16"	4 1/8"	18 #	22 #
3"	16 9/16"	22 11/16"	2 5/8"	4 1/2"	20 #	25 #

2 and 4 Hole Flanges
Contact factory for options and dimensions

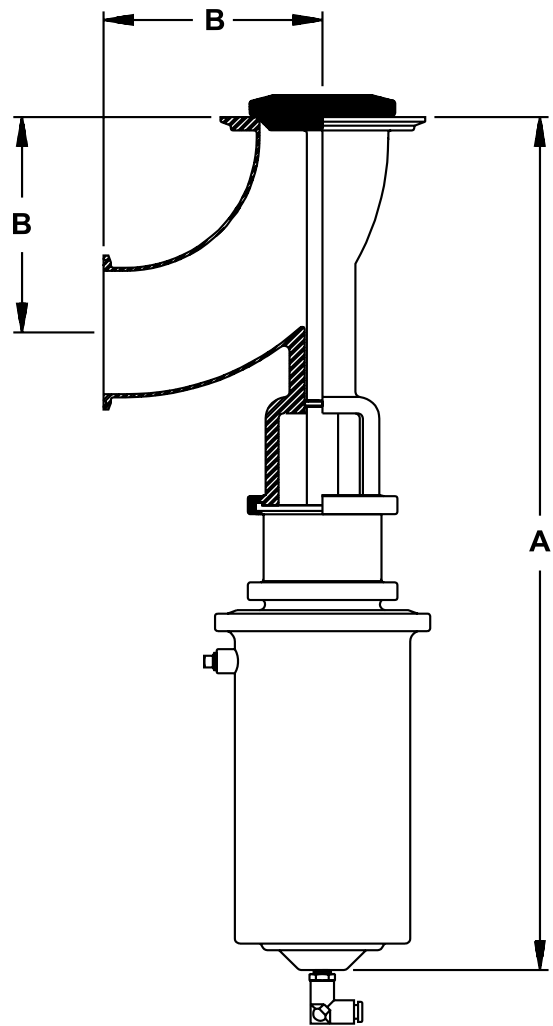
Elbow Valves

SP164 Short Stroke Elbow Valve



Valves are shown with #10 Act.

SP165 Long Stroke Elbow Valve

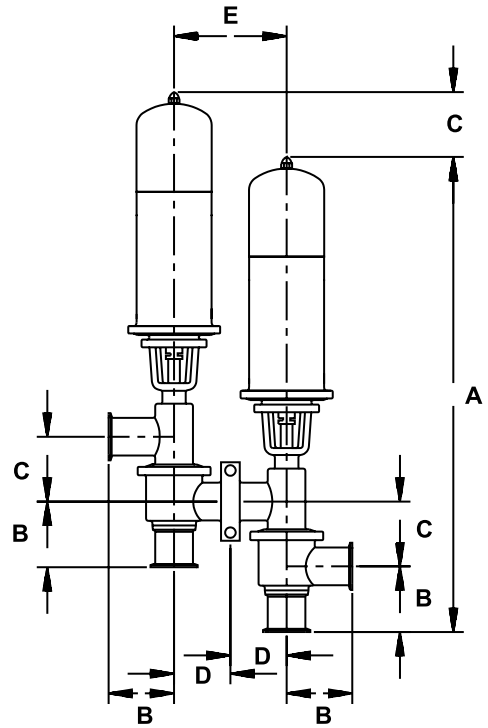
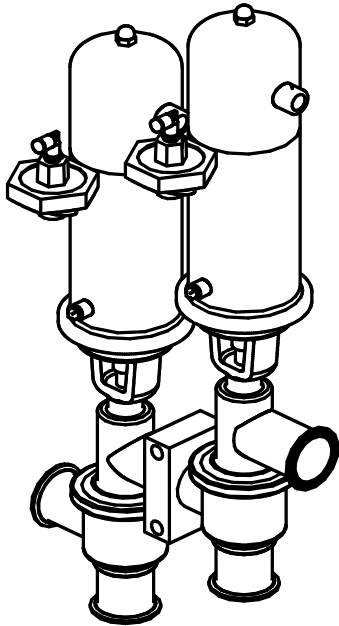


Valves are shown with #110 Act.

Valve Dimensions				Shipping #'s	
Size	A.		B.	SP164	SP165
	SP164	SP165			
2"	15 3/4"	20 1/4"	3 1/2"	19 #	22 #
2.5"	16 1/2"	21"	4 1/4"	19 #	23 #
3"	17 1/4"	21 3/4"	5"	20 #	25 #

Flow Diversion Valves

SP160 FDV Series Short Stroke
 SP161 FDV Series Long Stroke



Valve Dimensions						
Size	Short Stroke	Long Stroke	B.	C.	D.	E.
	A.					
1.5"	23 1/2"	n/a	2 3/4"	2 27/32"	3"	6"
2"	25"	27 1/2"	3 1/2"	3 7/16"	3 3/4"	7 1/2"
2.5"	25 7/8"	28 1/4"	3 1/2"	3 15/16"	3 3/4"	7 1/2"
3"	27 7/16"	29 5/8"	3 3/4"	4 9/16"	4"	8"

